```
logo
NTDB id 509 SM12261 RS00130 WP 078228442.1     MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 537 SMSK321 RS07120 WP 080550752.1    MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 279 KZH43 RS00140 WP 074017595.1      MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 238 SPD RS00140 WP 074017595.1        MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 204 SPR RS00140 WP 074017595.1        MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 169 SP RS00155 WP 074017595.1         MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNA....RVSLTGEKTKPMKLAEVTSINVNRTKTEMEE   76
NTDB id 397327 GE073 RS02915 WP 028598173.1   MAKVKIKFACTSCGTESPKWLGKCPGCGEWNTMVEEKETVVKTAGVGLSAPMSRGTKEKPRSIIDINTGQEPRIESTIGE   80
NTDB id 125 BSU 00870 NP 387968.1             MAKTKSKFICQSCGYESPKWMGKCPGCGAWNTMVEEMIKKAPAN.RRAAFSHSVQTVQKPSPITSIETSEEPRVKTQLGE   79
consensus                                     !!!*!**!*!**!!**!!!**!*!!*!!*!***!!!*********    *********!!************!******!

logo
NTDB id 509 SM12261 RS00130 WP 078228442.1     FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 537 SMSK321 RS07120 WP 080550752.1    FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 279 KZH43 RS00140 WP 074017595.1      FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 238 SPD RS00140 WP 074017595.1        FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 204 SPR RS00140 WP 074017595.1        FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 169 SP RS00155 WP 074017595.1         FNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQVG.TVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSV   155
NTDB id 397327 GE073 RS02915 WP 028598173.1   LNRVLGGGVVPGSLILVGGDPGIGKSTLLLQASHALAAAGLKVLYISGEESIRQTKLRADRLGALAESLYVLCETNMEHI   160
NTDB id 125 BSU 00870 NP 387968.1             FNRVLGGGVVKGSLVLIGGDPGIGKSTLLLQVSAQLSGSSNSVLYISGEESVKQTKLRADRLGINNPSLHVLSETDMEYI   159
consensus                                     *!!!!!!!!!*!!!*!*!!!!!!!!!!!!!!*!**!**** *!!!*!!!!!**!*!!!!*!!!**********!!*!***

logo
NTDB id 509 SM12261 RS00130 WP 078228442.1     RTEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 537 SMSK321 RS07120 WP 080550752.1    RAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 279 KZH43 RS00140 WP 074017595.1      RAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 238 SPD RS00140 WP 074017595.1        RAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 204 SPR RS00140 WP 074017595.1        RAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 169 SP RS00155 WP 074017595.1         RAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLY   235
NTDB id 397327 GE073 RS02915 WP 028598173.1   NEAIESVGPDFLVIDSIQTVYDPSVPSAPGSVAQVRECTAHFMRSSKIGGIATVLVGHVTKEGAIAGPRLLEHMVDCVLY   240
NTDB id 125 BSU 00870 NP 387968.1             SSAIQEMNPSFVVVDSIQTVYQSDITSAPGSVSQVRECTAELMKIAKTKGIPIFIVGHVTKEGSIAGPRLLEHMVDTVLY   239
consensus                                     ********!*!***!!!!!*********!!!*!!!!*!!**!***!***!****!!!!!!!!**!!!!*!!!!!!*!!!

logo
NTDB id 509 SM12261 RS00130 WP 078228442.1     FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 537 SMSK321 RS07120 WP 080550752.1    FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 279 KZH43 RS00140 WP 074017595.1      FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 238 SPD RS00140 WP 074017595.1        FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 204 SPR RS00140 WP 074017595.1        FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 169 SP RS00155 WP 074017595.1         FEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTM   315
NTDB id 397327 GE073 RS02915 WP 028598173.1   FEGERHHSYRLLRAVKNRFGSTNEIGIFEMGEDGLREVANPSELFLSERPLGVSGSTVVASMEGTRPVLVELQALVAPTH   320
NTDB id 125 BSU 00870 NP 387968.1             FEGERHHTFRILRAVKNRFGSTNEMGIFEMREEGLTEVLNPSEIFLEERSAGSAGSSITASMEGTRPILVEIQALISPTS   319
consensus                                     !!!!!!!**!*!!!!!!!!!!!!!!*!!!!!***!!*!!*!!!**!!*!!**!**!!****!!!!!!*!*!*!!!**!!*
```

```
logo
```

```
NTDB id 509 SM12261 RS00130 WP 078228442.1    FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 537 SMSK321 RS07120 WP 080550752.1    FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 279 KZH43 RS00140 WP 074017595.1      FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 238 SPD RS00140 WP 074017595.1        FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 204 SPR RS00140 WP 074017595.1        FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 169 SP RS00155 WP 074017595.1         FGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGL   395
NTDB id 397327 GE073 RS02915 WP 028598173.1   FPSPRRMSAGFDHHRMALIIAVLEKRMGLFLQTQDAYLNAAGGVRLDEPAVDLAAAVAIASSFKDAPTKPDDVIFGEVGL   400
NTDB id 125 BSU 00870 NP 387968.1             FGNPRRMATGIDHNRVSLLMAVLEKRVGLLLQNQDAYLKVAGGVKLDEPAIDLAIVISIASSFRDTPPNPADCFIGEVGL   399
consensus                                     !****!***!*!**!**!**!!!!!!*!!*!!*!!!!!**!!!!*!!!!!*!!!****!!!!**!*!**!*****!!*!!
```

```
logo
```

```
NTDB id 509 SM12261 RS00130 WP 078228442.1    TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITPPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 537 SMSK321 RS07120 WP 080550752.1    TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITPPMEIQVIGVTTIQEVLKKVFA.   453
NTDB id 279 KZH43 RS00140 WP 074017595.1      TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 238 SPD RS00140 WP 074017595.1        TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 204 SPR RS00140 WP 074017595.1        TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 169 SP RS00155 WP 074017595.1         TGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 397327 GE073 RS02915 WP 028598173.1   TGEVRAVSRAEQRVKEAQKLGFKRVILPEKSLKGWKPPDDIKIVGVNTVAEALRAALE.   458
NTDB id 125 BSU 00870 NP 387968.1             TGEVRRVSRIEQRVKEAAKLGFKRMIIPAANLDGWTKPKGIEVIGVANVAEALRTSLGG   458
consensus                                     !!!*!*!*!*!!!**!!*!!!!*****!***!*!**  !**!***!!****!*!*****
```

X non conserved

X similar

X $\geq$ 50% conserved